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EXAMINER

SNYDER, STEVEN G

ART UNIT	PAPER NUMBER
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4135

MAIL DATE	DELIVERY MODE
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10/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/507,397

Applicant(s)

HAULIN ET AL.

Examiner

Steven G. Snyder

Art Unit

2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/10/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

This is in response to application filed on September 13, 2005 in which claims 1 to 26 are presented for examination.

Status of Claims

Claims 1 to 26 are pending, of which claims 1 and 15 are in independent form.

Priority

1. Applicant is advised of possible benefits under 35 U.S.C. 119(a)-(d), wherein an application for patent filed in the United States may be entitled to the benefit of the filing date of a prior application filed in a foreign country.
2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "140" has been used to designate both the communications network and sub-unit in Fig. 1

Specification

3. The disclosure is objected to because of the following informalities: paragraph [0033] references "a communications network" and a "sub-unit" and labels both as numeral 140.

Appropriate correction is required.

Also, the examiner wishes to notify applicant that the abstract refers to communications network (140).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 3, 8, 9, 11, 15, 17 – 20, 22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al., U.S. Patent 6,892,251 (hereinafter referred to as Anderson) in view of Yukie et al., U.S. Patent 6,956,833 (hereinafter referred to as Yukie).

As per claim 1, Anderson discloses, in column 3 lines 39 - 53, a printer that includes a host interface. Also, as Anderson discloses in column 4 lines 28 - 36, how the printer's internal processor helps to implement general functions of a local printer. Anderson further discloses, in column 3 line 63 - column 4 line 9, how the local printer also includes a portable device communications port, which may be an infrared port. In light of the applicant's disclosure, specifically paragraph [0001], this meets the limitation of the instant claim that states, "A communication module adapted to be removably connected to a node in a communications network, the module being adapted to perform a primary function pertaining to an over-all operation of the module and a secondary function involving control of the primary function." Anderson's printer communicating with a host computer to implement general functions of a printer is considered to be equivalent to applicant's communication module performing a primary function. Also, Anderson's printer communicating with a portable device through a portable device communications port is considered to be equivalent to applicant's secondary function.

Anderson's local printer, as seen in Fig. 1, includes memory. It is well known in the art that printers can contain status registers and can communicate their status. This

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meets the limitation of the instant claim that states, "a first digital storage unit adapted to hold information pertaining to accomplishment of the primary function."

Also, as seen in Fig. 1 of Anderson's disclosure, a portable device can connect to the printer through a portable device communication port. This port is then connected to the printer's memory. Anderson further discloses, in column 3 line 63 - column 4 line 9, how the portable device communications port may be an infrared port. This meets the limitation of the instant claim that states, "at least one optical interface and is adapted to provide a local wireless access to the first digital storage unit, the local wireless access being provided independently of the primary function."

It is noted, however, that Anderson does not specifically teach the portable device communications port being bi-directional. Yukie, however, achieves the aspect of a portable device being wirelessly connected to a server or base station. Yukie describes this wireless connection as being preferably a bi-directional connection (See Yukie column 3 lines 56 - 62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Anderson's and Yukie's inventions, wherein the wireless connection described by Anderson would be a bi-directional connection. This would provide for a connection with more flexibility because reading and writing could be accomplished in both directions.

As per claim 2, the majority of the limitations of this claim have been addressed in the rejection to claim 1 (See Claim 1 rejection above). Also, Anderson discloses, in column 5 lines 9 - 16, how a user can send a document stored on the portable device to the printer for printing.

It is noted, however, that Anderson does not specifically teach the portable device reading out data from the printer's storage unit. Yukie, however, achieves the aspect of supplying a device with a bi-directional wireless connection to a base system (See Yukie column 3 lines 56 - 62). This would allow a wirelessly connected device a channel that could be used to read out of the printer's memory.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Anderson's and Yukie's inventions, wherein the wireless connection described by Anderson would be a bi-directional connection. This would provide for a connection with more flexibility because reading and writing could be accomplished in both directions.

As per claim 3, the majority of the limitations of this claim have been addressed in the rejection to claim 1 (See Claim 1 rejection above). Also, Anderson discloses, in column 5 lines 9 - 16, how a user can send a document stored on the portable device to the printer for printing. It is well known in the art that a printer buffer would be used to store the data to be printed. This meets the limitation of the instant claim that states, "allow updating of the contents of the first digital storage unit."

It is noted, however, that Anderson does not specifically teach the portable device communications port being bi-directional. Yukie, however, achieves the aspect of supplying a device with a bi-directional wireless connection to a base system (See Yukie column 3 lines 56 - 62). This would allow a wirelessly connected device a channel that could be used to write to the printer's memory.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Anderson's and Yukie's inventions, wherein the wireless connection described by Anderson would be a bi-directional connection. This would provide for a connection with more flexibility because reading and writing could be accomplished in both directions.

As per claim 8, the majority of the limitations of this claim have been addressed in the rejection to claim 1 (See Claim 1 rejection above). Also, it is noted that Anderson does not specifically teach using any security measures. Yukie, however, achieves the aspect of a data server made to include security or conditional access systems (See Yukie column 4 lines 1 – 22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Anderson's and Yukie's inventions, wherein the wireless connection would only be allowed if certain security measures are met. This would provide a means for protection from unauthorized users.

As per claim 9, the majority of the limitations of this claim have been addressed in the rejection to claim 8 (See Claim 8 rejection above). Also, it is noted that Anderson does not specifically teach using any security measures. Yukie, however, achieves the aspect of a data server made to include password access only. (See Yukie column 4 lines 1 – 22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Anderson's and Yukie's inventions, wherein the wireless connection would only be allowed if a correct password is supplied. This would provide a means for protection from unauthorized users.

As per claim 11, the majority of the limitations of this claim have been addressed in the rejection to claim 8 (See Claim 8 rejection above). Also, it is noted that Anderson does not specifically teach using any security measures. Yukie, however, achieves the aspect of a data server made to include conditional access. (See Yukie column 4 lines 1 – 22). Also, Yukie describes a user sending identification information to gain access to the storage device (See Yukie column 13 lines 1 – 22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Anderson's and Yukie's inventions, wherein the wireless connection would only be allowed if a user supplies an acceptable identification. This would provide a means for protection from unauthorized users.

As per claim 15, the limitations of this claim that state, "A method of communicating with a communication module being removably connected to a node in a communications network, the module being adapted to perform a primary function pertaining to an over-all operation of the module and a secondary function involving control of the primary function," and "exchanging data between the module and a portable software carrier unit via a bi-directional optical interface, the data including information pertaining to accomplishment of the primary function and being exchanged independently of the primary function," have been addressed in the rejection to claim 1 above. Therefore, the rejection to claim 1 applies to this claim as well.

The remaining limitations of this claim ("generating an authorization signal for the module; receiving the authorization signal in the module") have been addressed in the rejection to claim 8 above. Therefore, the rejection to claim 8 applies to this claim as well.

As per claim 17, the majority of the limitations of this claim have been addressed in the rejection to claim 15 (See Claim 15 rejection above). Also, the limitations of this claim are equivalent to the limitations of claim 11. Therefore, the rejection to claim 11 applies to this claim as well.

As per claim 18, the majority of the limitations of this claim have been addressed in the rejection to claim 15 (See Claim 15 rejection above). Also, the

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limitations of this claim are equivalent to the limitations of claim 9. Therefore, the rejection to claim 9 applies to this claim as well.

As per claims 19 and 20, the majority of the limitations of these claims have been addressed in the rejection to claim 18 (See Claim 18 rejection above). Also, it is noted that neither Anderson nor Yukie specifically teach using a password with a static and dynamic segment for conditional access. Kefford, however, achieves the aspect of secure transmission of data with a mobile device by sending passwords and using static encryption keys or dynamic encryption keys (See Kefford column 6 lines 6 – 36). Kefford teaches using static or dynamic encryption keys, therefore, splitting a password so that both static and dynamic encryption keys are used, would be obvious to one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's and Yukie's inventions to include Kefford's invention, wherein a password contains a static and a dynamic segment. This would provide for an extra level of security.

As per claim 22, the majority of the limitations of this claim have been addressed in the rejection to claim 15 (See Claim 15 rejection above). Also, the limitations of this claim are equivalent to the limitations of claim 3. Therefore, the rejection to claim 3 applies to this claim as well.

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As per claim 25, the majority of the limitations of this claim have been addressed in the rejection to claim 15 (See Claim 15 rejection above). Also, the limitations of this claim are equivalent to the limitations of claim 2. Therefore, the rejection to claim 2 applies to this claim as well.

Claims 4 – 6, 23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al., U.S. Patent 6,892,251 (hereinafter referred to as Anderson) in view of Yukie et al., U.S. Patent 6,956,833 (hereinafter referred to as Yukie) and further in view of Bagley et al., U.S. Patent 5,761,397 (hereinafter referred to as Bagley).

As per claim 4, the majority of the limitations of this claim have been addressed in the rejection to claim 1 (See Claim 1 rejection above). Also, Anderson shows, in Fig. 1, how the printer contains a memory.

It is noted, however, that neither Anderson nor Yukie specifically teach the printer containing a register including status data that can be queried. Bagley, however, achieves the aspect of a printer having a status register (See Bagley column 4 lines 13 – 24). Bagley describes how the status register indicates whether a print job is active. Also, Bagley describes how channels are established that allow the printer to send data to a host computer when the printer's status is requested.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's and Yukie's inventions to include

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Bagley's invention, wherein the printer contains a status register that may be queried.

This would allow for a printer's status to be available to a device that is connected to the printer.

As per claim 5, the majority of the limitations of this claim have been addressed in the rejection to claim 3 (See Claim 3 rejection above). Also, Anderson discloses, in column 4 lines 46 - 47, how the memory of the printer may include both volatile and nonvolatile memory components.

It is noted, however, that neither Anderson nor Yukie specifically teach the printer containing a register that stores information pertaining to the accomplishment of the primary function. Bagley, however, achieves the aspect of a printer having a group of status registers (See Bagley column 4 lines 13 – 24). Bagley describes how the status registers can indicate whether a print job is active. Therefore, if a status register indicates that a print job is active and then indicates that a print job is not active, accomplishment of the print is indicated.

It is also noted that neither Anderson nor Yukie specifically teach the bi-directional interface being adapted to receive a command and alter a parameter in the register pertaining to the accomplishment of a function. Bagley, however, achieves the aspect of the printer responding to received print commands (See Bagley column 3 lines 39 – 61). Also, because Bagley describes a status register being used to indicate that a print job is active, it is inherently taught that a print command would cause this active status register to be changed.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's and Yukie's inventions to include Bagley's invention, wherein the printer accepts commands and the printer contains a status register that may indicate whether a print job is active. This would allow for a printer's status to be updated.

As per claim 6, the majority of the limitations of this claim have been addressed in the rejection to claim 3 (See Claim 3 rejection above). Also, the limitations of this claim are equivalent to the limitations of claim 5, with the exception of introducing a second digital storage unit and a third register in the first digital storage unit.

Anderson discloses, in column 4 lines 46 - 47, how the memory of the printer may include both volatile and nonvolatile memory components. It is noted, however, that neither Anderson nor Yukie specifically teach the printer containing status registers. Bagley, however, achieves the aspect of a printer with a group of status registers (See Bagley column 4 lines 13 – 24).

It is also noted that neither Anderson nor Yukie specifically teach the printer containing a second digital storage unit. However, due to the nature of memory, a single physical memory unit may be arranged as more than one memory unit. In light of applicant's specification, specifically paragraph [0036], the second digital storage unit is used to temporarily store information pertaining to the accomplishment of the primary function. This data is then entered into a register in the first storage unit. As stated in the rejection to claim 5 above, the combination of systems described by Anderson,

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Yukie, and Bagley, can be used to accomplish the same results. Therefore, the system described by a combination of Anderson's, Yukie's, and Bagley's invention meets this limitation.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's and Yukie's inventions to include Bagley's invention, wherein one of the group of status registers would temporarily hold information indicating accomplishment. This would allow for a printer's status to be updated.

As per claim 23, the majority of the limitations of this claim have been addressed in the rejection to claim 22 (See Claim 22 rejection above). Also, the limitations of this claim have been addressed in the rejection to claim 5. Therefore, the rejection to claim 5 applies to this claim as well.

As per claim 26, the majority of the limitations of this claim have been addressed in the rejection to claim 25 (See Claim 25 rejection above). Also, the limitations of this claim are equivalent to the limitations of claim 4. Therefore, the rejection to claim 4 applies to this claim as well.

Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al., U.S. Patent 6,892,251 (hereinafter referred to as Anderson) in view of Yukie et al., U.S. Patent 6,956,833 (hereinafter referred to as Yukie) as

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applied to claim 1 above, and further in view of Nakaoka et al., U.S. Patent

Application 2007/0027990 (hereinafter referred to as Nakaoka).

As per claim 10, the majority of the limitations of this claim have been addressed in the rejection to claim 8 (See Claim 8 rejection above). Also, it is noted that neither Anderson nor Yukie specifically teach using an address to allow printing through a conditional access unit. Nakaoka, however, achieves the aspect of using an address to identify a client (See Nakaoka paragraph [0075]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's and Yukie's inventions to include Nakaoka's invention, wherein a portable device's address would be used to decide whether or not the device is granted access to the printer. This would provide a means for protection from unauthorized users.

As per claim 16, the majority of the limitations of this claim have been addressed in the rejection to claim 15 (See Claim 15 rejection above). Also, the limitations of this claim are equivalent to the limitations of claim 10. Therefore, the rejection to claim 10 applies to this claim as well.

Claims 12 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al., U.S. Patent 6,892,251 (hereinafter referred to as Anderson) in view of Yukie et al., U.S. Patent 6,956,833 (hereinafter referred to as Yukie), and

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further in view of Nakaoka et al., U.S. Patent Application 2007/0027990 (hereinafter referred to as Nakaoka), and further in view of Benjamin et al., U.S. Patent 5,668,654 (hereinafter referred to as Benjamin).

As per claims 12 – 14, the majority of the limitations of these claims have been addressed in the rejection to claim 10 (See Claim 10 rejection above). Also, it is noted that neither Anderson nor Yukie nor Nakaoka specifically teach using LEDs to indicate states of the bi-directional interface. Benjamin, however, achieves the aspect of using LEDs to indicate receiving data or transmitting data. Further, Benjamin describes how any operational state can be indicated using LEDs (See Benjamin column 5 lines 48 – 58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's, Yukie's, and Nakaoka's inventions to include Benjamin's invention, wherein LEDs are used to indicate operational states of the bi-directional interface.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al., U.S. Patent 6,892,251 (hereinafter referred to as Anderson) in view of Yukie et al., U.S. Patent 6,956,833 (hereinafter referred to as Yukie), and further in view of Want et al., U.S. Patent 5,564,070 (hereinafter referred to as Want).

As per claim 21, the majority of the limitations of this claim have been addressed in the rejection to claim 18 (See Claim 18 rejection above). Also, the limitation of this claim that states, "data which is to update the contents of the first digital storage," is equivalent to the limitation of claim 3. Therefore, the rejection to claim 3 applies to this claim as well.

It is noted, however, that neither Anderson nor Yukie specifically teach sending a checksum along with the password. Want, however, achieves the aspect of using a checksum in infrared communication to verify that data sent is equivalent to data received (See Want Table 1 in column 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's and Yukie's inventions to include Want's invention, wherein the data sent by way of the bi-directional infrared interface would be sent with a checksum. This would provide a means for determining that the data has not been corrupted.

Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al., U.S. Patent 6,892,251 (hereinafter referred to as Anderson) in view of Yukie et al., U.S. Patent 6,956,833 (hereinafter referred to as Yukie), further in view of Bagley et al., U.S. Patent 5,761,397 (hereinafter referred to as Bagley), and further in view of Roohparvar, U.S. Patent 6,785,765 (hereinafter referred to as Roohparvar).

As per claim 7, the majority of the limitations of this claim have been addressed in the rejection to claim 6 (See Claim 6 rejection above). Also, it is noted that neither Anderson nor Yukie nor Bagley specifically teaches altering the contents of the third register based on information in the second digital storage unit after a reset. However, Roohparvar achieves the aspect of one register's contents being loaded into another register during initialization (See Roohparvar paragraph [0052]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's, Yukie's, and Bagley's inventions to include Roohparvar's invention, wherein the contents of one register are copied into another register as part of an initialization process. As stated by Roohparvar, in paragraph [0007], certain types of memory operate at higher clock speeds than others. Therefore, it would be beneficial to copy data stored in a slower memory into a faster memory in order to decrease operation time.

As per claim 24, the majority of the limitations of this claim have been addressed in the rejection to claim 23 (See Claim 23 rejection above). Also, the limitations of the instant claim that state, "receiving at least one piece of information pertaining to the accomplishment of the primary function via the bi-directional interface; storing temporarily the at least one piece of information in a second digital storage unit," are equivalent to the limitations of claim 6. Therefore, the rejection to claim 6 applies to this claim as well.

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It is noted, however, that neither Anderson nor Yukie nor Bagley specifically teaches altering the contents of the third register based on information in the second digital storage unit after a reset. However, Roohparvar achieves the aspect of one register's contents being loaded into another register during initialization (See Roohparvar paragraph [0052]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Anderson's, Yukie's, and Bagley's inventions to include Roohparvar's invention, wherein the contents of one register are copied into another register as part of an initialization process. As stated by Roohparvar, in paragraph [0007], certain types of memory operate at higher clock speeds than others. Therefore, it would be beneficial to copy data stored in a slower memory into a faster memory in order to decrease operation time.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,974,312 discloses a wireless communication, that can be infrared, and uses unique identifiers and an authentication process.

U.S. Patent 5,185,853 discloses a printer with internal status, command, and data registers.

U.S. Patent 5,764,863 discloses serial or parallel connections and infrared connections to a printer that allows spooling of jobs.

U.S. Patent 6,952,780 discloses a secure transfer of a document to a printer using identification and access rights.

U.S. Patent 6,859,197 discloses a portable device to interface with a printer and a computing device using an infrared interface.

IBM Technical Disclosure Bulletin NB940491, April 1994, 'Universal Wireless Connectivity for Portable Computers' discloses using infrared communication between a printer and a portable computing device.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven G. Snyder whose telephone number is (571) 270-1971. The examiner can normally be reached on Mon. - Thurs. 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Coby can be reached on (571) 272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S.S.


FRANTZ COBY
SUPERVISORY PATENT EXAMINER